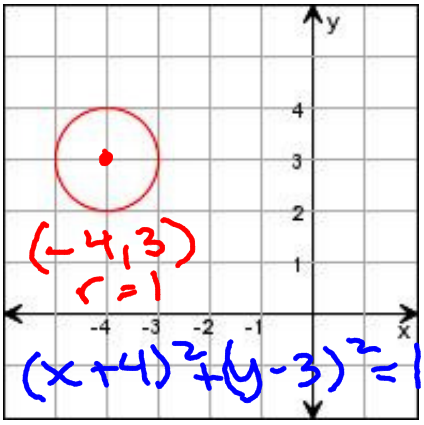
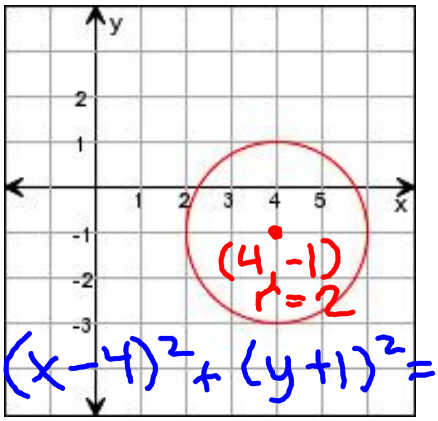
Working backward... writing the equation, given the center and radius $(x-h)^2+(y-k)^2=r^2$

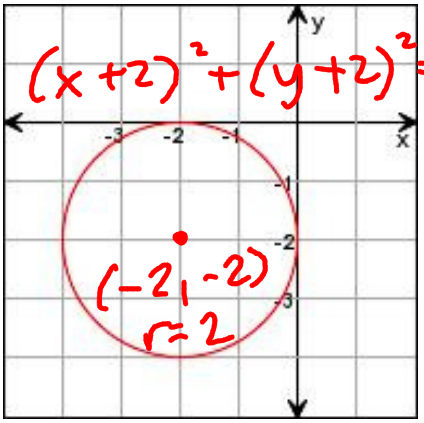
C (-8, -8); r = 2 $(x+8)^2+(y+8)^2=4$

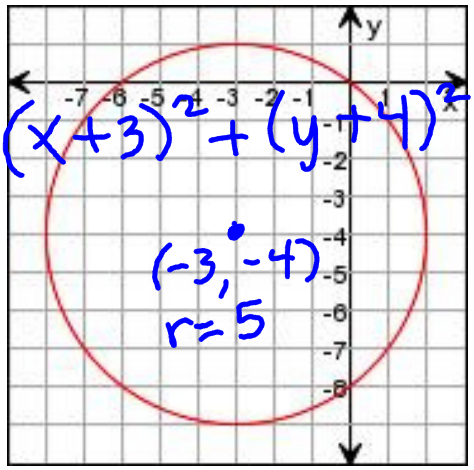
C (-9, 0); r = 15 $(x+9)^2+y^2=225$

C (5, -3); r = $\sqrt{2}$ $(x-5)^2+(y+3)^2=2$


y
x
(-4,3)
r=1
(x+4)²+(y-3)²=1


y
x
(4,-1)
r=2
(x-4)²+(y+1)²=4


y
x
(x+2)²+(y+2)²=4
(-2,-2)
r=2


y
x
(x+3)²+(y+4)²=25
(-3,-4)
r=5

Kuta Software - Infinite Algebra 2 Name_____

Graphing and Properties of Circles

Date_____ Period____

Identify the center and radius of each.

1) $x^2 + y^2 = 49$

Center: $(0, 0)$
Radius: 7

2) $x^2 + y^2 = 324$

Center: $(0, 0)$
Radius: 18

3) $(x + 2)^2 + (y - 3)^2 = 183$

Center: $(-2, 3)$
Radius: $\sqrt{183}$

4) $(x + 7)^2 + (y + 8)^2 = 64$

Center: $(-7, -8)$
Radius: 8

5) $(x + 10)^2 + (y + 9)^2 = 36$

Center: $(-10, -9)$
Radius: 6

6) $(x + 5)^2 + (y - 10)^2 = 9$

Center: $(-5, 10)$
Radius: 3

7) $x^2 + (y + 2)^2 = 121$

Center: $(0, -2)$
Radius: 11

8) $(x - 14)^2 + (y - 2)^2 = 4$

Center: $(14, 2)$
Radius: 2

9) $364 + 28y + y^2 + x^2 = -26x$

Center: $(-13, -14)$
Radius: 1

10) $x^2 + y^2 + 24x + 10y + 160 = 0$

Center: $(-12, -5)$
Radius: 3

11) $-6x = -x^2 + 32y - 264 - y^2$

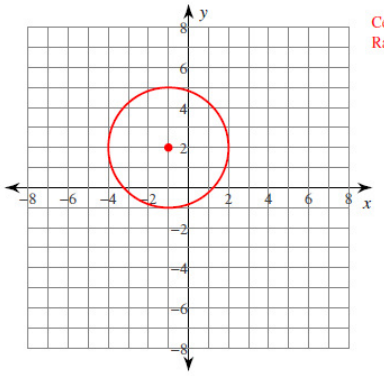
Center: $(3, 16)$
Radius: 1

12) $-6x + x^2 = 97 + 10y - y^2$

Center: $(3, 5)$
Radius: $\sqrt{131}$

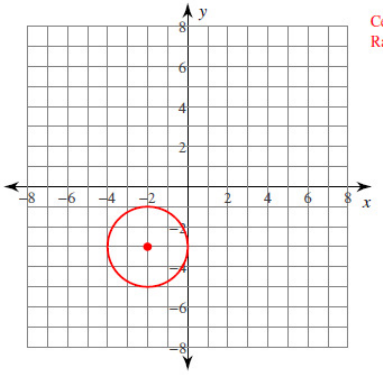
Identify the center and radius of each. Then sketch the graph.

13) $(x+1)^2+(y-2)^2=9$



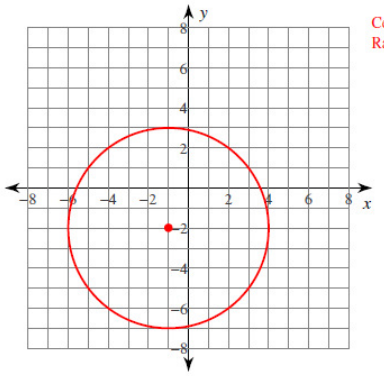
Center: $(-1, 2)$
Radius: 3

14) $(x+2)^2+(y+3)^2=4$



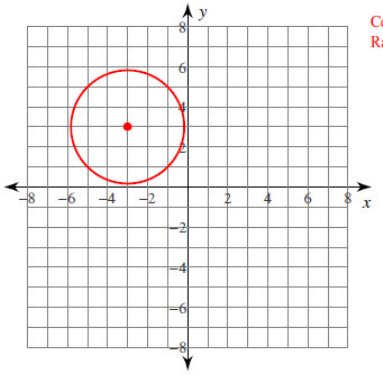
Center: $(-2, -3)$
Radius: 2

15) $(x+1)^2+(y+2)^2=25$



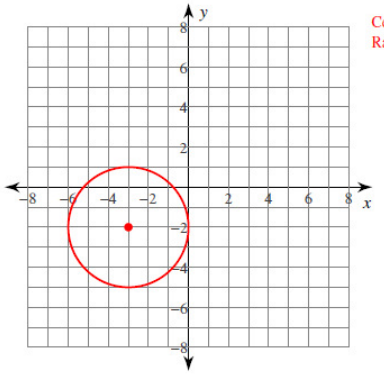
Center: $(-1, -2)$
Radius: 5

16) $(x+3)^2+(y-3)^2=8$



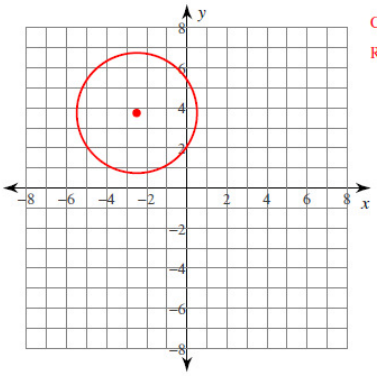
Center: $(-3, 3)$
Radius: $2\sqrt{2}$

17) $(x+3)^2+(y+2)^2=9$



Center: $(-3, -2)$
Radius: 3

18) $\left(x+\frac{5}{2}\right)^2+\left(y-\sqrt{14}\right)^2=9$



Center: $\left(-\frac{5}{2}, \sqrt{14}\right)$
Radius: 3